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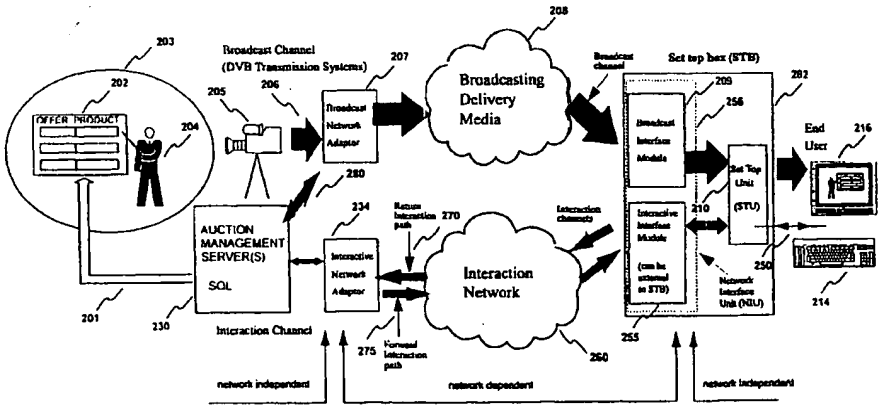

(57) Abstract: The present invention relates generally to a method, a system and a business model for performing sale of products. The products may be new goods, secondary market goods, services, collectibles etc. The present invention relates more particularly to implementing auctions with telecommunications media. One idea of the present invention is providing an auction where information on the products in sale and the offers is transferred to potential buyers via digital television. The user makes offers using return channel messages of the digital television system (230, 234, 250, 255, 260, 270). The auction management system may comprise a display screen (202) for showing said information on the products. This display screen can be imaged with video cameras (205) for broadcasting on television (206, 207, 208, 209, 210, 211, 216). This enables to create an entertaining auction program, where there is a display screen provided for real time information on the products and offers. The user of the auction service does not need to have a continuous telephone connection to the service provider. The user may neither need to make specific agreements with the service provider or a bank for the purchase payments in order to use the auction service.

WO 01/69345 A2

IMPROVED METHOD, SYSTEM AND BUSINESS MODEL FOR PERFORMING AN AUCTION

Field of the Invention

The present invention relates generally to a method, a system and a business model for performing sale of products. The products may be new goods, secondary market goods, services, collectibles etc. The present invention relates more particularly to implementing auctions with telecommunications media.

Background of the invention

It is well known to arrange auctions with an auctioneer and an audience of potential buyers. However, it may take much time to travel to the auctions and, if the products in sale are not attractive, the travelling and the time used by the potential buyer may be wasted. In order to be able to do shopping and take part in auctions at home, electronic sale services has been developed.

Most systems for processing the electronic sale of products are seller-driven, whereby the seller prices, packages, configures and offers the product for sale, and the buyer decides whether or not to accept the seller's offer. It is also prior known to arrange electronic auctions, wherein a seller and/or a buyer can make offers to sell/buy a determined product. When the offers to sell and buy meet, a transaction is recorded between the seller and the buyer. For example, the auction management system may process each received buying offer to determine whether one or more counterparts are willing to accept the offer. If a seller accepts a given purchase offer, and ultimately delivers goods complying with the buyer's offer, the buyer is bound on behalf of the accepting seller, to form a legally binding contract. A purchase offer thus is a binding offer containing one or more conditions.

In order to guarantee the buying offers the buyers may have, for example, a general-purpose account, such as a credit or debit account. The buyer must therefore have an agreement with a bank and the auction service provider for the payment of purchases. On the other hand, the delivery and quality of the products to be sold can be guaranteed by the dealer/authenticator, which can be part of the auction management system or another third party having knowledge of the subject goods. The dealer/authenticator may also serve as the distribution point for the products. A

prior art system for implementing electronic sale is disclosed in patent application document WO 99/23595 [1].

Figure 1 illustrates a prior art purchase management system 100 for receiving and processing conditional purchase offers (CPOs) for collectibles from one or more buyers, such as buyers 110 and 120. The CPO management system 100 processes each received CPO to determine whether one or more sellers, such as sellers 130 and 140, are willing to accept a given CPO. If a seller accepts a given CPO, and delivers goods complying with the buyer's CPO, the collectible CPO management system 100 binds the buyer 110 on behalf of the accepting seller 130, to form a legally binding contract.

Once a CPO is accepted, but prior to completing the transaction, the goods are preferably forwarded to a dealer/authenticator, such as dealer/authenticator 150 or 160, for evaluation. The dealer/authenticator 150 can be part of the collectible CPO management system 100 or another third party having knowledge of the subject goods. The dealer/authenticator 150 preferably validates, authenticates and optionally guarantees the goods, while also serving as the distribution point for the goods sold by the CPO management system 100. As used herein, validation establishes that the item actually exists. Authentication proves that the item is in the condition stated by the seller. The guarantee, if desired, insures that the buyer has not purchased a fake or counterfeit item. Thus, once an item is delivered to the dealer/authenticator 150 and approved, the dealer/authenticator 150 can deliver the item to the buyer and authorize payment to the accepting seller.

The collectible CPO management system 100 allows a number of sellers to conditionally accept each CPO. In this manner, the collectible CPO management system 100 ensures that at least one of the accepting sellers will have the collectible item in the condition specified by the buyer. Preferably, each of the accepting seller(s) are prioritised into a hierarchy based on predetermined criteria. For example, sellers may be assigned a priority in the hierarchy based on the order in which their acceptances are received by the CPO management system 100. Alternatively, priority may be determined based on the geographical proximity of each accepting seller to the buyer. In addition, the priority may be based on the performance of each accepting seller for previous transactions.

A CPO is thus a binding offer containing one or more conditions submitted by a buyer for the purchase of goods, at a buyer-defined price. The CPO may be

guaranteed, for example, using a general-purpose account, such as a credit or debit account, maintained by an issuing bank, such as issuing bank 170 and 180. The conditions specified in a CPO may also include, for example a description of the goods and a required quality.

As shown in FIG. 1, the CPO management system 100 includes a central controller 190 for processing the information in a manner described above.

Each buyer and seller contacts the CPO management system 100, for example, by means of telephone line, in-person contact or through an agent, and provides the CPO management system 100 with the terms of their CPOs, or the list of available items the seller desires to sell, as appropriate. Each buyer and seller may employ a general-purpose computer, for communicating with the collectible CPO management system 100. The general-purpose computer of each buyer and seller is preferably comprised of a processing unit, a modem, memory means and any software required to communicate with the collectible CPO management system 100.

There are certain drawbacks related with the described prior art solutions to implement an electronic auction. The communication between the auction management system and the user is carried out via a telephone line. The user may have a computer with a modem, and the user makes a call to the auction service provider. In order to get information on the products that are in sale and in order to make offers, the user needs to have continuous telephone connection to the auction management system. A continuous connection further causes high expenses to the user. It also takes a lot of time for the user to follow the auction, and if the communication is made with the user's computer, the user has to stay by the computer for long periods. One possibility could be to make short connections every now and then, but the drawback with this solution is that the right instant to make an offer for a product may be missed.

Another drawback with the electronic sale services in the Internet is that they are often not pleasant for all users. Even if the Internet services have gained popularity, many people do not find attractive to communicate with a computer system for long periods.

A further problem is related to authentication of a buyer. Since the user may make binding offers through this telephone connection, there must be an authentication

procedure before accepting the user to the electronic sale service. Before this kind of an authentication procedure is possible, there must be an agreement between the user and the electronic sale provider, and the electronic sale provider must give security codes for establishing the connections. A further problem with the prior art solutions is that one needs to have a payment agreement with the auction service provider and a bank as described above. Therefore it may be too troublesome for ordinary potential users to try and start using the auction services.

Summary of the Invention

The objective of the present invention is to create a solution for providing auctions wherein the above mentioned problems of the prior art solutions are reduced or avoided.

One idea of the present invention is providing an auction where information on the products in sale and the present offers is transferred to potential buyers via digital television system. This can be made e.g. in the television program, or by adding text in the program, on so-called teletext (or text TV) pages or on forward interaction channels of the digital television system. The communication from the user to the auction management system can be accomplished by sending digital messages on the return channel of the digital television system using e.g. a user terminal that is connected to a so-called set top box. The auction management system may comprise a display screen for showing said information on the products. This display screen can be imaged with video cameras for broadcasting on the digital television. This enables to create an entertaining auction program, where there is a display screen provided for a real time information on the products and offers.

The European Telecommunications Standard number ETS 300 800 [2], known also as the DVB-RC (Digital Video Broadcasting - Return Channel) standard and compliant with the DAVIC (Digital Audio-Visual Council) 1.4 standard, lays down the general framework for implementing digital television. The broadcast of a digital television system consists of transmitting so-called MPEG2-TS packets on an in-band broadcast channel. There is also implemented an uplink transmission channel as a part of bi-directional communication over a cable television network. An apparatus known as the cable modem, or set top box, which is a basically known part of the terminal arrangement located at e.g. a private home, is allowed to emit transmissions in the uplink direction. The transmission can be made, for example, within slots of TDMA frames according to a certain schedule. A centrally located

device known as the head-end composes the uplink transmission schedule and communicates the allocated uplink transmission time intervals to the cable modems. The messages that comprise these allocations are known as MAC or Media Access Control messages, and they are complemented by the information of MAC Flags included in the downlink transmission. One of the programming interfaces specified for the digital television is called Multimedia Home Platform MHP, which will probably be the most widely used interface.

The uplink return channel of a digital television system is mainly designed for viewers to take part in different questionnaire and voting, [2]. In such applications it is not necessary or desirable that information on the viewers' identities are collected or analysed. However, since a return channel can be allocated to a dedicated user, the user that is sending a message can be identified. It is also possible to identify the sender of a message from a identification part of a return channel message. This ability to identify the sender of a message can be utilized in the present invention; as it is also essential in providing a sales/auction service, that the auction management system can identify the customer or subscriber sending the message. It is also possible to use the digital television system for confirming the acceptance of an offer to the buyer. It is possible to use either a broadcast channel of forward interaction channels for this purpose.

The inventive solution has several advantages over the prior art solutions. The auction can be made a very entertaining online program using electronic mass media, and the viewers can have an immediate access to the auction. The user is able to view an auction when there is the concerned digital TV channel and digital TV terminal available. A user does not need to make a continuous data connection over a telephone line to the auction management system. The user can also get instant information on a possible acceptance of a user's offer. And if the user wishes to make a new purchase offer, the user can send in real time a message with the required offer information. There is no need to make a new data transfer connection over a telephone line involving possible unsuccessful attempts causing a harmful delay in transmitting the offer.

A further advantage with the present invention is that the payment of the bought products can be confirmed by a digital television operator. When an offer is made with a return channel message, the digital TV system operator and the auction service provider gets the identification of the subscriber connection where the message has been sent. This is reliable information on the subscriber and can

therefore be used for confirming the buyer. The payment can be added in the subscriber's television subscriber bill or the auction service provider can use the subscriber information for sending an invoice to the buyer. Therefore there is no need for separate payment agreements between a user, the auction service provider and a bank. The only agreement that may be needed is an agreement between the auction service provider and a digital television system operator for transaction of the payments. The user can therefore start trying and using the auction service without any additional agreements. This is important for getting the large numbers of television viewers to attend to the auction.

The present invention concerns also a business model for arranging an auction in the described manner.

The present invention is characterised by the following features:

A method for performing an electronic auction, comprising the steps of:

providing several potential buyers with information on a product in sale;

obtaining a purchase offer for a product from a potential buyer;

transferring the information on the purchase offer from the potential buyer to an auction management system;

providing an acceptance of said purchase offer;

wherein the step of transferring the information on the purchase offer from the potential buyer to the system is provided with a digital message on a digital television return channel, and

the potential buyers are provided with information on a product in sale using a channel of a digital television system.

A system for performing electronic auctions, comprising:

means for providing at least one potential buyer with information on a product in sale;

means for obtaining a purchase offer for a product from a potential buyer;

means for receiving the information on the purchase offer from the potential buyer to an auction management system;

means for providing an acceptance of said purchase offer;

wherein the means for receiving the information on the purchase offer from the potential buyer to the system is means for receiving a digital message on a return channel of a digital television system, and

the potential buyers are provided with information on a product in sale using a channel of the digital television system.

A business model for performing an auction using telecommunications media, comprising the steps of:

providing several potential buyers with information on a product in sale;

obtaining a purchase offer for a product from a potential buyer;

transferring the information on the purchase offer from the potential buyer to an auction management system;

providing an acceptance of said purchase offer;

wherein the step of transferring the information on the purchase offer from the potential buyer to the system is provided with a digital message on a return channel of a digital television system, and,

the potential buyers are provided with information on a product in sale on using a channel of the digital television system.

Preferred embodiments of the present invention are described in the dependent claims.

A more complete understanding of the present invention, as well as further features and advantages of the present invention, will be obtained by reference to the following detailed description and drawings.

Brief Description of the Drawings

FIG. 1 is a schematic block diagram illustrating a prior art collectible conditional purchase offer (CPO) management system;

FIG. 2 is a schematic block diagram illustrating an exemplary electronic auction system according to the invention; and

FIG. 3 illustrates a flow diagram for an exemplary method for providing an electronic auction according to the invention until the acceptance of a conditional purchase offer,

FIG. 4 illustrates a flow diagram for an exemplary method for providing an electronic auction according to the invention starting from the acceptance of a conditional purchase offer,

FIG. 5A illustrates an example of a return message for transmitting a purchase offer according to the invention, and

FIG. 5B illustrates an example of information content of a message for transmitting a purchase offer according to the invention.

Detailed Description

Figure 1 was described in the prior art section of the specification.

Figure 2 illustrates an exemplary embodiment of an auction arrangement in accordance with the invention. In this embodiment the auction takes place in a TV studio, where there may also be audience. There is a stage 203 for the anchor(s) 204 of the auction show. There is also a large display screen 202 on the stage where the information on the products in sale, as well as the offered prices, are displayed. The auction show is imaged with a TV/video camera 205, and the show is further broadcasted, 206, 207, on digital television broadcast channel 208. The display screen of the auction stage is controlled, 201, by the auction management system 230, and the display can therefore give a real time information on the products and offers for all viewers of the broadcast channel.

A person who attends to the auction can watch the auction in the television 216. In order to view the digital television broadcast, the viewer also needs to have a set top box 282 for interfacing to the broadcast channel, and for achieving authentication for receiving the programmes of the TV operator, 210.

If the person wants to make an offer on some product in sale, the offer is transmitted to the auction management system with a message that is transmitted on a return channel of the digital television system. A user has a user interface, such as keyboard 214, connected to the set top unit 210 of the set top box 282. The set top unit is further coupled to an interactive interface module 255 of the set top box 282 (it may also be external to the set top box). The interactive interface module interfaces with the interaction network 260 for receiving information from the digital tv system on a forward interaction path/channel 275 and transmitting information on the return interaction path/channel 270. The auction management system is also interfaced to the interaction network 260 with an interactive network adaptor 234.

The broadcasting delivery media 208 and the interaction network 260 are described separate in Fig. 2 for clarity, but of course, they may also be implemented using the same media channels.

The system may use e.g. the MHP (Multimedia Home Platform) programming interface. The user interface communication 250 may be realised using e.g. DVB Java and/or DVB HTML languages.

The auction management system 230 may also include interfaces for other kinds of user equipment and communications, such as interfaces for mobile communication systems or the Internet. The Auction management system may comprise an MS SQL server 7 and an MS IIS 4 Web server (not shown in Fig. 2), just to be mentioned as examples of implementation. The communication between the Internet terminal and the electronic auction management system can be implemented according to the prior art.

A customer that attends to auction connects to the interactive communications of the digital television system and sends the offer information to the auction management system with a return channel message. The customer can then immediately see the offer being entered to the display screen of the auction stage.

It is clear that the electronic auction management system may comprise communication ports for many digital television networks that are provided by different operators. These digital television systems may also have different communications standards. Most cable digital television systems provide a return channel for sending uplink messages. It is usually not necessary to form a continuous call connection to the operator.

There may also be communication 280 from the DVB transmission system to the auction management server. In many applications it is important that the functions of the auction management server are synchronised with the events of the auction. For example, completing a sale of an item may mean that some auction functions must be stopped, and some new auction functions may start. The information on events in the auction may be received to the auction management server e.g. directly from the broadcast network adaptor by identifying predetermined codes from the DVB information flow. The code may be added with the camera system 205 by the person operating it, or by the auctioneer. Also the use of an image recognition procedure is possible for detecting certain events. Of course, also the data transfer

201 can be a two-way transfer, and any information from the auctioneer to the auction management system can then also be transferred through this data line. By using these methods the auction system can be made as automatic as possible.

The subscriber registers of a digital television system include information on accumulated value of used services for billing the subscribers. The provider of the electronic auction services may therefore have an agreement with the digital television operator according to which the payments of the purchases are added to the accumulated value of services of the subscriber. Even if the payments are not directed through the operator, the auction service provider can use the information of the messages to authenticate the sender of the message and use it in a direct billing procedure.

The functional units in Figure 2 are not explained in more detail, as they can be designed by a person skilled in the art using this description of the basic inventive idea. Also functional details as described with Figure 1 can be applied. One should also note that the "electronic auction management system" may in the simplest form be just a receiver device for receiving digital messages and showing the offers on the screen. The purchase transactions can then be made manually, if this is desirable.

Figure 3 illustrates a flow diagram of an exemplary method 300 for providing an auction according to the invention. First, In order to facilitate bi-directional communication between the viewer and the auction management system, the digital television system may allocate a dedicated return channel for the viewer, step 305. This may be allocated upon request or automatically. If a viewer wants to take part in the auction the viewer may, for example, send an initial message to the auction management system informing that the user wants to take part in the auction (this step is not shown in the flow diagram). After receiving this initial message, the auction management system enters the subscriber's identity information in said list. It is also possible that no registration of a user is required.

In step 310 the auction service provider determines a product for sale in the auction. The seller of the product usually also determines an upset price or "starting price", below which the product cannot be sold. This information is stored in the auction management system.

After the product in sale has been determined, the auction management system enters the information on the product on a display screen on the auction stage, step 320. This information may include a product type, an auction item code, and an upset price. The auction stage is further video imaged with e.g. a television camera, and the program is broadcast on an electronic mass media, such as television channel. This way the information on the auction display screen is transmitted to the viewers of the mass media program, step 330. It is also possible to use e.g. added text, teletext pages, or forward channels of the digital television system for transmitting the information. If forward channels are used, it is possible to send the information only to a determined group of viewers.

When a potential buyer sees information on a product in sale, the buyer evaluates whether an offer should be made, step 330. If the viewer does not find the product information attractive, step 350, the viewer may remain waiting for new products for sale, step 352. When a new product comes for sale, steps 354, 310, the same steps as described above are repeated.

In step 340 the buyer may find the product information attractive but may still want to follow the offers of other buyers before making an offer, steps 350-354. When the buyer then decides to make an offer for the product the buyer writes a message according to a determined form that includes information on the new offer and the product, step 360. If there is just one product in sale, it may be unnecessary to identify the product in the message for the offer. The message is then transmitted from the buyer's terminal to the auction management system. The information of the message is then read and stored in the register of the auction management system.

After the buyer has transmitted an offer to the auction management system, it may happen that some other buyer gives a better offer for the product and the offer of said buyer is not accepted, step 390. In such a case the buyer has to make a new evaluation and decision on whether to give a next offer or not, step 340.

If there are no better offers, a decision can be made that the buyer's offer is accepted. The decision can be made by the auction management system on certain predetermined conditions, by the auctioneer or by the seller of the product. It may be helpful for the anchor/auctioneer, if the decision is made by the system. However, the auction program may be more entertaining, if the decisions are made by the auctioneer. If the decision is made by the system, the auction management system may wait for a determined time period after an offer has been made, and, if

there are no better offers given on that time period, the auction management system accepts the offer. Another possibility is that the acceptance is programmed to take place on a determined time instant. Whoever then has the highest offer at that moment will have the offer accepted.

Figure 4 illustrates a flow diagram on steps after the acceptance of the offer in the method of Fig. 3. After the auction management has accepted the offer, the corresponding buyer is informed on the acceptance. One possibility is to give the information on the auction program via the broadcast channel. However, there may be a need to transmit an acceptance message to the buyer the receipt of which can be confirmed. The message can be transferred by e.g. a message on a forward interaction channel of the digital TV system. In the method of Figure 4 the auction management system forms a forward interaction message with the information on acceptance of the offer, step 410. The auction management system then transmits the message to the terminal station of the buyer thus indicating that the offer has been accepted, step 420.

It is important that there is a way for binding the buyer with the accepted offer to purchase said product. The auction service provider may identify the buyer's payment and delivery information based on the message that included the accepted offer. It is possible to identify the sender of the message on basis of the allocation of the channel on which the message was received. Another possibility is to utilise user information within the message. The auction service provider may get the name and address of the subscriber from the operator of the digital television or the auction service provider may have its own list of subscriber information.

Another possibility is to use a smart card for authentication of the user. The set top box may have an interface for connecting a smart card, and a smart card may actually be needed for the authentication of the user in order to receive TV programmes. The same smart card could then also be used for authenticating the user of the auction service, so that the changing of a smart card would not be necessary during the watching of television. Alternatively there may be a special smart card issued by the auction service provider needed for the authentication in the auction service. A further possibility is that a general identity smart card, or a banking smart card is used for authentication in order to use the auction service.

Since the message from the buyer can be reliably authenticated, it is possible to carry out the billing procedure, step 440, and delivery of the products, step 450, the without any separate, complicated authentication of users of the auction service.

Figure 5A illustrates an example on a return channel message that can be used for transmitting an offer to the auction management system according to the invention. The length of the message is e.g. 64 bytes, which is one option available according to the standard [2]. The message includes a user word (UW) 502 for a user check (e.g. 4 bytes), the payload area 504 for the information from the user (e.g. 53 bytes, or characters), a parity check 506 (e.g. 6 bytes), and the guard band 508 (e.g. 1 byte).

Figure 5B illustrates an example on the user input information for a return channel message that can be used for transmitting an offer to the auction management system according to the invention. The user area 504 comprises a first identifier field 510 for identifying the product that the offer is made for. This identifier field may not be needed, if there is just one item for sale at any time. A second identifier field 530 includes the monetary amount that is offered for the product. A third identifier field 550 includes information for authenticating the buyer. This identifier field may not be needed, if the buyer making the offer is identified in some other way, such as the subscriber identifier that is transmitted together with the message data. It is also possible to use more than one method for authenticating the user in order to achieve a high degree of security.

The identifier fields are separated with separating characters 520, 540. In this example the separating character is ":". The separating character can be any predetermined character or it may consist of more than one successive characters. The information field in this example has a maximum length of 53 characters. Usually all this data space is not needed for the offer data, so there is unused data space in the message, 560. There may also be other ways to recognise the identifier fields of the message than using separating characters. One alternative possibility is to use predetermined locations for the different identifier fields in the message. However, this solution is more difficult for the user because one would need to check that all the input data is in its correct place in the message.

It is also possible, that the message for making an offer is formed by the set top box according to simple controls from a user interface unit. The user may, for example, get a suggestion for making an offer via the broadcast channel / TV or the

interaction network / terminal. It may then be necessary just to press an "enter" key for accepting the offer to be made, and the set top box then forms a suitable message for delivering the information on the offer to the auction management system.

As mentioned above, the return channel message usually includes, except the user input data, also information for identifying the subscriber connection where the message is transmitted from.

As described above, the present invention gives remarkable advantages over prior art systems for implementing an electronic auction. When digital television system is used in informing the user about the products in sale and currently valid offers, the user gets the information instantly without any need to keep continuous telephone connection to the auction management system.

When the return channel messages are used in making offers, the user can make an offer quickly without any need to make a telephone connection and authentication procedures. The user may not need to make special agreements with banks or the auction service provider in order to start using the auction service. The user can attend to the auction if the digital TV service and equipment is available. The user does not need to have a phone with Internet connection capabilities, and neither does the digital television system need to have a capability to provide Internet services.

It is to be understood that the embodiments and variations shown and described herein are merely illustrative of the principles of this invention and that various modifications may be implemented by those skilled in the art without departing from the scope and spirit of the invention.

Especially, it is to be understood that the present invention is not in any way restricted to the mentioned communications systems or standards. The digital television system includes most preferably a cable television network for the described communications between the user and the digital television operator, but also other communications possibilities can be applied, such as bi-directional wireless links.

One should also note that "auction" must be understood with a broad meaning, including a variety of sales transactions. In the specification there is described an

advantage of the invention that it is possible to convey the payment of the purchase via a digital television operator, but one should understand, that together with the present invention it is also possible to use other ways of payment, such as using a separate user register of the auction service provider and user agreements for debiting a registered buyer.

Claims

1. A method for performing an electronic auction, comprising the steps of:

providing several potential buyers with information on a product in sale;

obtaining a purchase offer for a product from a potential buyer;

transferring the information on the purchase offer from the potential buyer to an auction management system;

providing an acceptance of said purchase offer;

wherein the step of transferring the information on the purchase offer from the potential buyer to the system is provided with a digital message on a digital television return channel, and

the potential buyers are provided with information on a product in sale using a channel of a digital television system.

2. A method according to claim 1, wherein the step of transferring the information on the purchase offer from the potential buyer to the system comprises the steps of:

forming a message including information on a new offer of the potential buyer;

transferring said message from the buyer to the system on a return channel of the digital television system; and

reading said information from said message for determining the purchase offer of said potential buyer.

3. A method according to claim 1, wherein said information on a new offer of the potential buyer includes at least one of the following information:

- product identifier,
- offered monetary amount, and
- buyer identifier.

4. A method according to claim 3, further comprising the step of initiating a payment of said purchase, and the use of said buyer identifier to collect funds from said buyer.

5. A method according to claim 1, further comprising the step of allocating a dedicated return channel for the buyer.

6. A method according to claim 5, further comprising the step of identifying and/or authenticating the potential buyer that has transmitted a message including a

purchase offer on the basis of the allocation of the channel that the message is received from.

7. A method according to claim 1, wherein the information on a product in sale comprises product type and upset price or latest offer.

8. A method according to claim 1, wherein the channel of a digital television system for providing potential buyers with information on a product in sale is a broadcast channel.

9. A method according to claim 1, wherein information on a product in sale and information on the current offer for the product are shown on a display screen of the auction management system.

10. A method according to claims 8 and 9, wherein the display screen is imaged by a television camera and the information on the display screen is thus transmitted to potential buyers via a television channel.

11. A method according to claim 1, wherein said product is a new article, a secondary market article, service or a collectible.

12. A method according to claim 1, wherein the acceptance of the purchase offer is based on a determined point of time.

13. A method according to claim 1, wherein the acceptance of the purchase offer is based on a determined time period after the receiving the latest purchase offer.

14. A method according to claim 3, wherein the purchase offer identifiers of the message are recognised based on at least one separating character between two identifier fields.

15. A method according to claim 2, wherein the payment of the purchase is conveyed via a digital television operator.

16. A method according to claim 1, wherein the buyer is identified on basis of an identifier of a subscriber connection in the digital television system, and said identifier is derived based on the received message including information on an offer.

17. A method according to claim 1, further comprising a step of transferring an initial message from a buyer's terminal to the auction management system and storing the buyer's identity information on a list of subscribers that take part in the auction.

18. A method according to claim 17, further comprising a step of transferring a termination message from the buyer's terminal to the auction management system and removing the buyer's identity information from the list of subscribers that take part in the auction.

19. A method according to claim 1, wherein the acceptance of an offer is informed to the corresponding buyer with a message on a forward interaction channel.

20. A method according to claim 1, wherein the acceptance of an offer is informed on a broadcast channel, such as teletext page.

21. A method according to claim 1, further comprising the step of identifying and/or authenticating the potential buyer on the basis of a smart card of the potential buyer.

22. A method according to claim 21, wherein said smart card is also used for identifying and/or authenticating a subscriber interface of the digital television system.

23. A system for performing electronic auctions, comprising:

means for providing at least one potential buyer with information on a product in sale;

means for obtaining a purchase offer for a product from a potential buyer;

means for receiving the information on the purchase offer from the potential buyer to an auction management system;

means for providing an acceptance of said purchase offer;

wherein the means for receiving the information on the purchase offer from the potential buyer to the system is means for receiving a digital message on a return channel of a digital television system, and

the potential buyers are provided with information on a product in sale using a channel of the digital television system.

24. A system according to claim 23, wherein the means for receiving the information on the purchase offer from the potential buyer to the system further comprises:

means for receiving a message from the potential buyer to the system; and

means for reading information on a new offer of the potential buyer from said message.

25. A system according to claim 23, wherein said information on a new offer of the potential buyer includes at least one of the following information:

- product identifier,
- offered monetary amount, and
- buyer identifier.

26. A system according to claim 25, further comprising means for initiating a payment of said purchase, and the use of said buyer identifier to collect funds from said buyer.

27. A system according to claim 23, further comprising means for allocating a dedicated return channel for a terminal of the buyer.

28. A system according to claim 27, further comprising means for identifying the potential buyer that has transmitted a message including a purchase offer on the basis of the allocation of the channel that the message is received from.

29. A system according to claim 23, wherein the information on a product in sale comprises product type and upset price or latest offer.

30. A system according to claim 23, wherein the channel of a digital television system for providing potential buyers with information on a product in sale is a broadcast channel.

31. A system according to claim 23, comprising a display screen for showing information on a product in sale and information on the current offer for the product.

32. A system according to claims 30 and 31, comprising a television camera for imaging the display screen means for transmitting the image of the display screen to potential buyers via a broadcast channel of a digital television system.

33. A system according to claim 23, wherein said product is a new article, a secondary market article, service or a collectible.

34. A system according to claim 23, comprising means for the acceptance of the purchase offer based on a determined point of time.

35. A system according to claim 23, comprising means for the acceptance of the purchase offer based on a determined time period after the receiving the latest purchase offer.

36. A system according to claim 25, comprising means for recognising the purchase offer identifiers of the message based on at least one separating character between two identifier fields.

37. A system according to claim 23, comprising means for conveying the payment of the purchase via the digital television system operator.

38. A system according to claim 23, comprising means for identifying the buyer on basis of an identifier of a subscriber connection in the digital television system.

39. A system according to claim 23, comprising means for identifying and/or authenticating the buyer on the basis of a smart card that is connected to a buyer's terminal.

40. A system according to claim 23, comprising means for identifying and/or authenticating both the buyer and a subscriber interface on the basis of a same smart card that is connected to a buyer's terminal.

41. A system according to claim 23, further comprising means for transferring an initial message from a buyer's terminal to the auction management system and means for storing the buyer's identity information on a list of subscribers that take part in the auction.

42. A system according to claim 41, further comprising means for transferring a termination message from a buyer's terminal to the auction management system and means for removing the buyer's identity information from the list of subscribers that take part in the auction.

43. A system according to claim 23, comprising means informing on the acceptance of an offer to the corresponding buyer with a message transferred on a forward interaction channel.

44. A system according to claim 23, comprising means for informing the acceptance of an offer on a broadcast channel of the digital television system, such as teletext page.

45. A business model for performing an auction using telecommunications media, comprising the steps of:

providing several potential buyers with information on a product in sale;

obtaining a purchase offer for a product from a potential buyer;

transferring the information on the purchase offer from the potential buyer to an auction management system;

providing an acceptance of said purchase offer;

wherein the step of transferring the information on the purchase offer from the potential buyer to the system is provided with a digital message on a return channel of a digital television system, and,

the potential buyers are provided with information on a product in sale on using a channel of the digital television system.

46. A business model according to claim 45, wherein the potential buyers are provided with information on a product in sale on using a broadcast channel of the digital television system.

47. A business model according to claim 45, wherein the potential buyers are provided with information on a product in sale on using a forward interaction channel of the digital television system.

48. A business model according to claim 45, the auction is performed in a program on the digital television system.

49. A business model according to claim 48, wherein the auction is run on a stage, the received purchase offers are displayed on a display screen which is located on the stage, and the stage with the anchor(s)/auctioneer(s) and the display screen is shown on the digital television program.

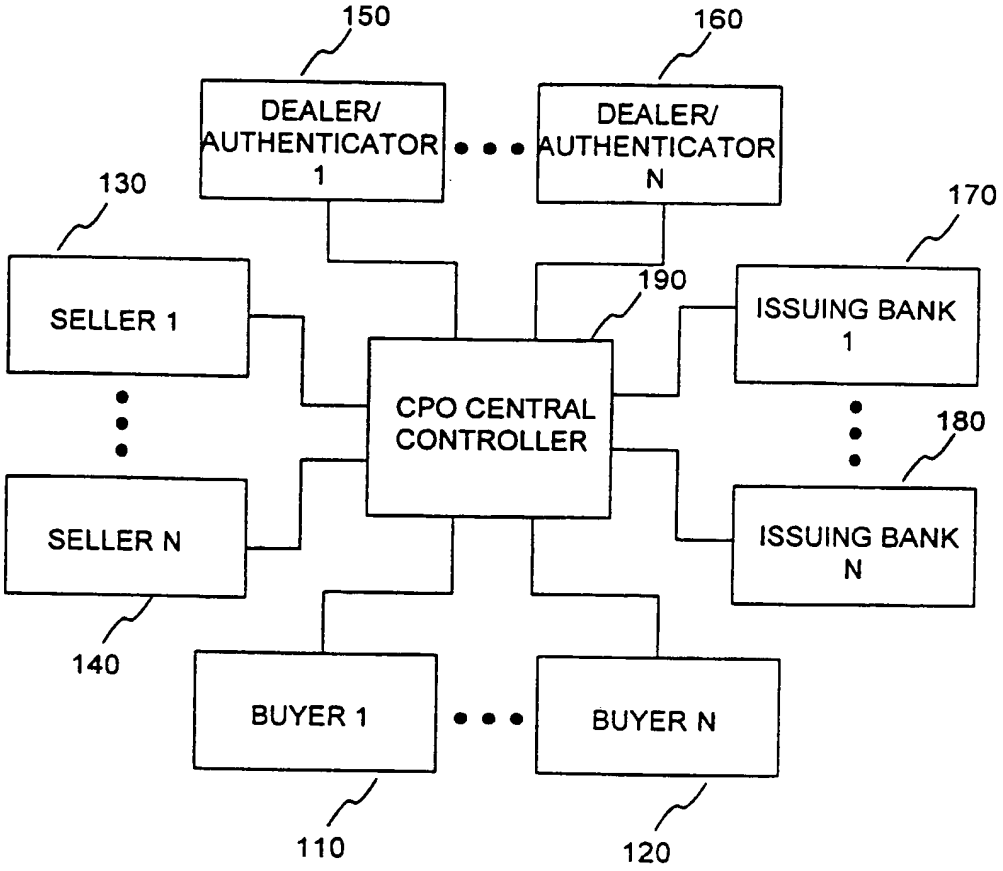

FIG. 1
PRIOR ART

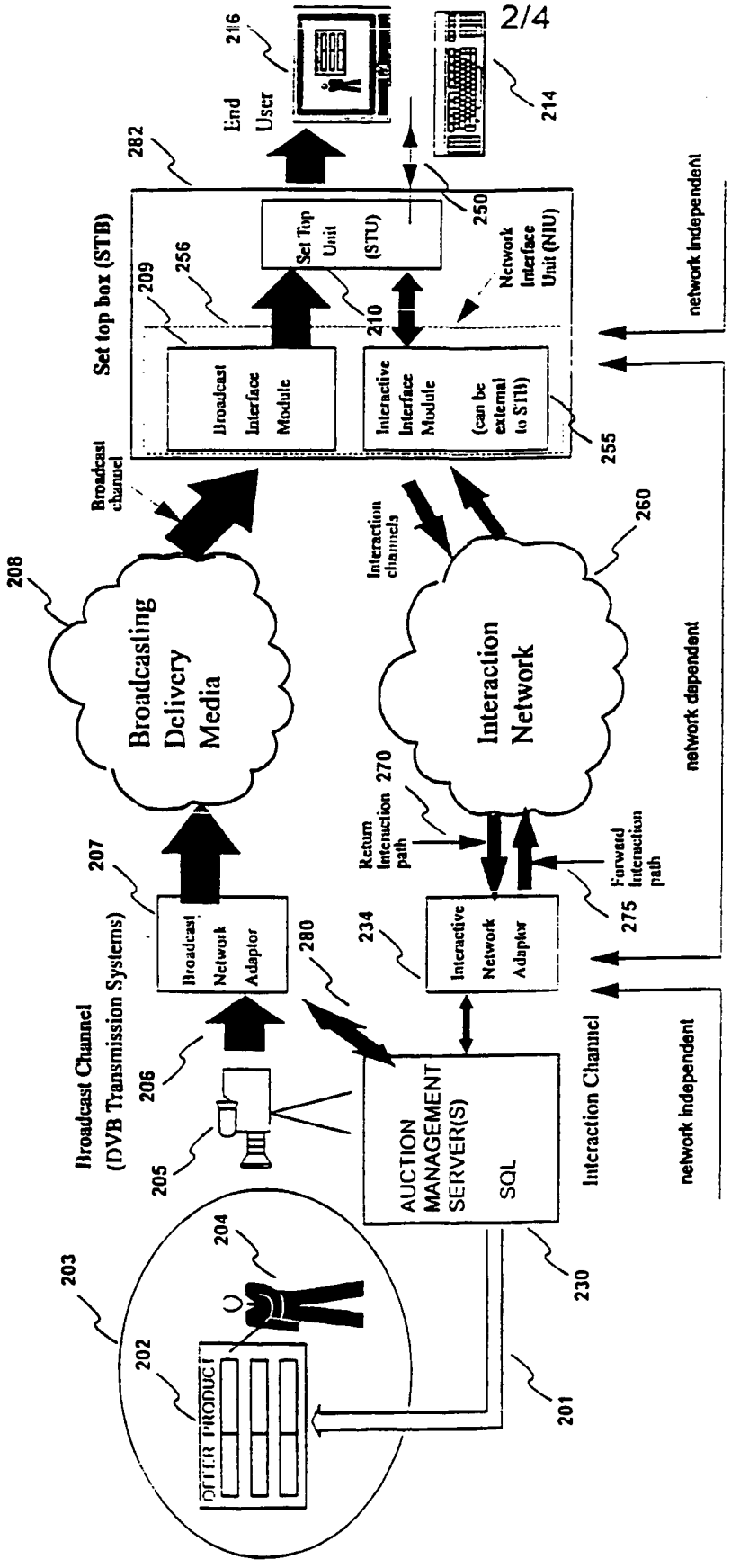
End User
216
214
282
Set top box (STB)
Set Top Unit (STU)
Network Interface Unit (NIU)
250
209
256
210
Broadcast Interface Module
Interactive Interface Module
(can be external to STB)
255
Broadcast channel
Interaction channels
260
208
Broadcasting Delivery Media
Interaction Network
network independent
network dependent
network independent
270
Return Interaction path
Forward Interaction path
275
207
Broadcast Network Adaptor
234
Interactive Network Adaptor
280
Broadcast Channel (DVB Transmission Systems)
206
205
AUCTION MANAGEMENT SERVER(S)
SQL
Interaction Channel
230
203
204
202
OFFER PRODUCT
201

FIG. 2

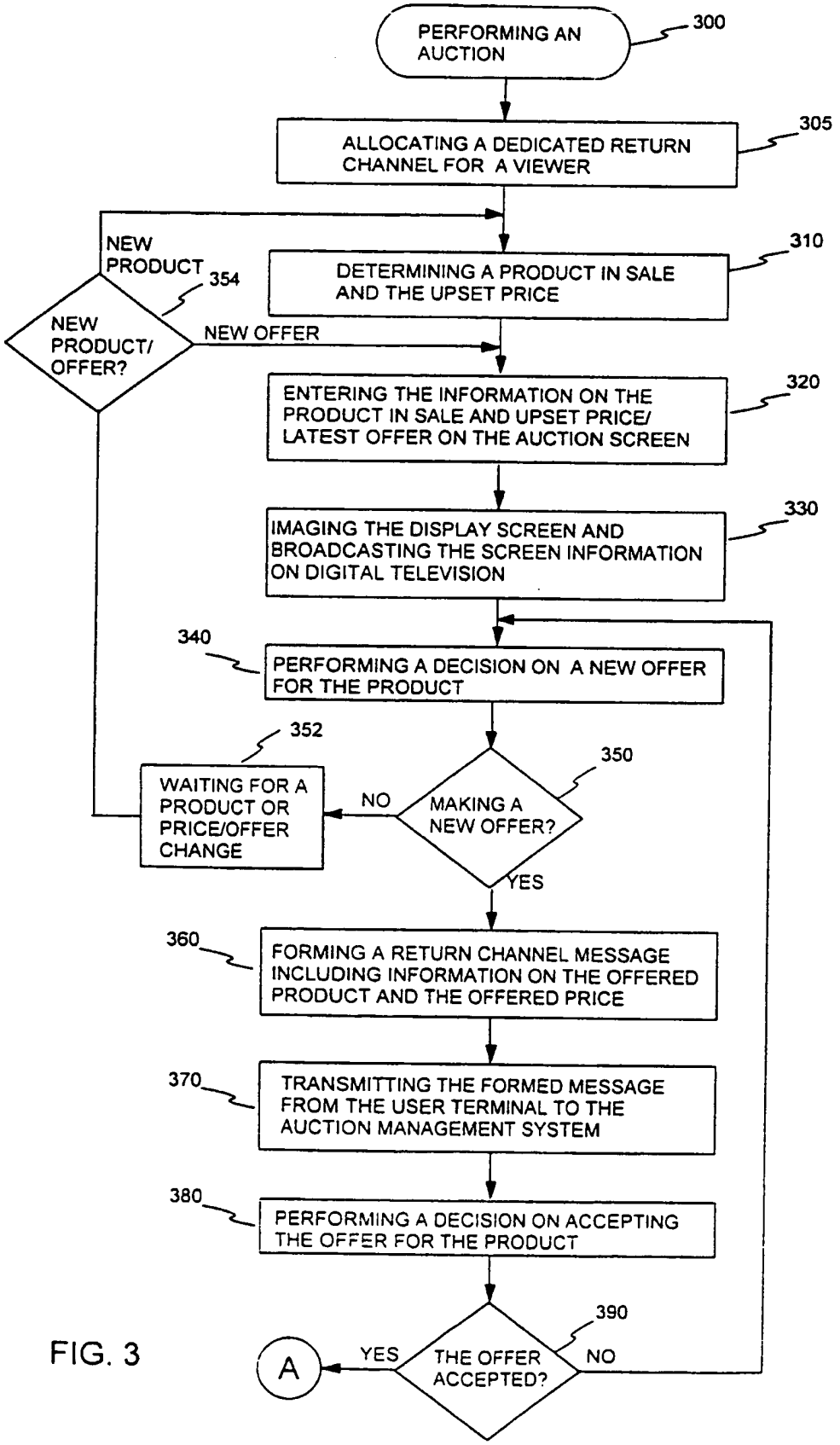
PERFORMING AN AUCTION
300
ALLOCATING A DEDICATED RETURN CHANNEL FOR A VIEWER
305
NEW PRODUCT
354
NEW PRODUCT/ OFFER?
NEW OFFER
DETERMINING A PRODUCT IN SALE AND THE UPSET PRICE
310
ENTERING THE INFORMATION ON THE PRODUCT IN SALE AND UPSET PRICE/ LATEST OFFER ON THE AUCTION SCREEN
320
IMAGING THE DISPLAY SCREEN AND BROADCASTING THE SCREEN INFORMATION ON DIGITAL TELEVISION
330
340
PERFORMING A DECISION ON A NEW OFFER FOR THE PRODUCT
352
WAITING FOR A PRODUCT OR PRICE/OFFER CHANGE
NO
MAKING A NEW OFFER?
350
YES
360
FORMING A RETURN CHANNEL MESSAGE INCLUDING INFORMATION ON THE OFFERED PRODUCT AND THE OFFERED PRICE
370
TRANSMITTING THE FORMED MESSAGE FROM THE USER TERMINAL TO THE AUCTION MANAGEMENT SYSTEM
380
PERFORMING A DECISION ON ACCEPTING THE OFFER FOR THE PRODUCT
390
THE OFFER ACCEPTED?
YES
NO
A

FIG. 3

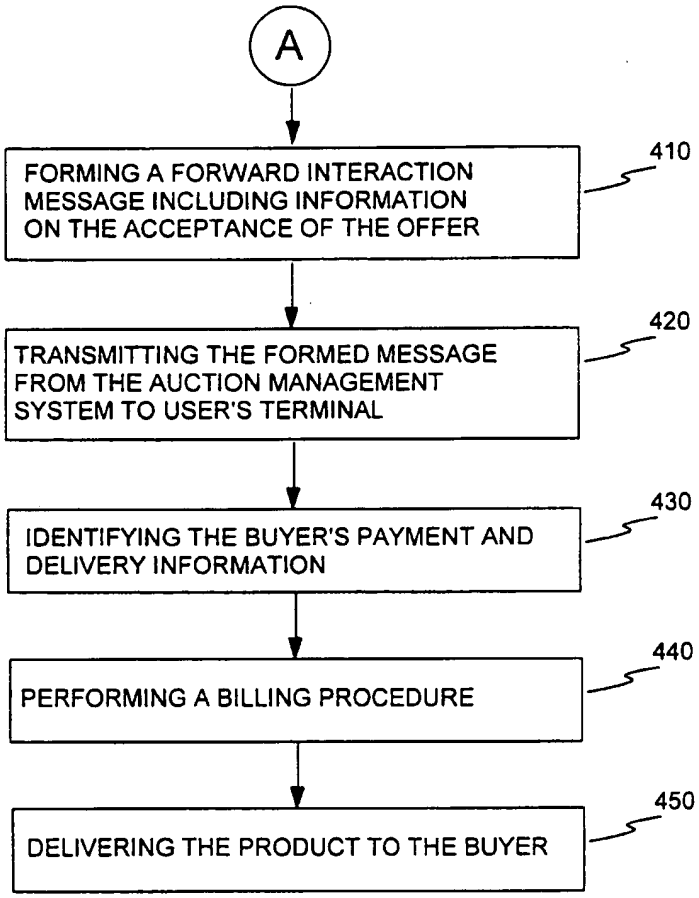

FIG. 4

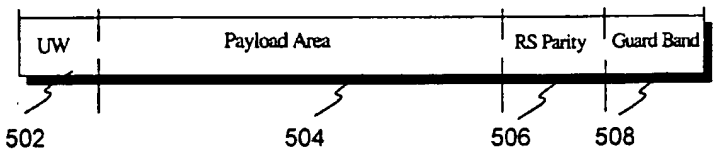

FIG. 5A

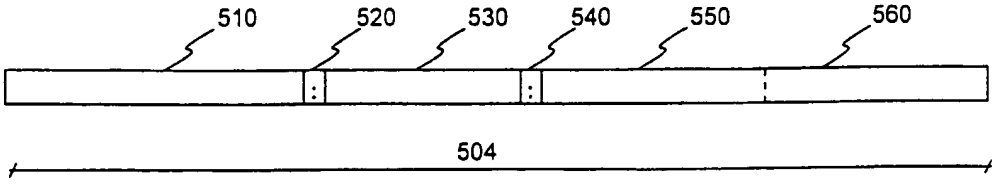

FIG. 5B